HW#22H: ANGLE CHASES w/ || lines & /

Honors Geometry

Due Date: Wednesday, Oct. 15th

Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ TP: \_\_\_\_\_\_\_

**Failure to show all work and write in complete sentences will result in LaSalle!**

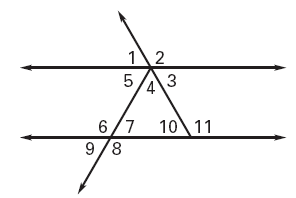
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| --- | --- |
| 1. In the figure below, lines *a* and *b* are parallel, and 9 = 100. Find 1. | 2. In the figure below, segments *MA* and *HT* are parallel. HMA, MAT, ATH, and THM are all right angles. If 5 = 75 and what is the 4?  2  5  6  3  7  4  1  H  T  M  A |
| 3. In the figure below, *AD*  *BD* and *DC AB*. If *m*B is 30, what is *m*C?  a. 30  b. 120  c. 150  d. Cannot be determined  *A*  *D*  *C*  *B*  Justify your response: | 4. In the figure below, lines *l* and *m* are parallel. Find the indicated angle.  45  ?  *l*  130 o o  *m* |
| 5. If 12 4, then which pairs of lines, if any, must be parallel?     1. *a b* only 2. *m n* only 3. *a b* and *m n* 4. No lines must be parallel 5. Cannot be determined from the given information   Justify your response: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | 6. In the figure below, lines *p* and *q* are parallel. Which of the following must be true?     1. 5 = 2 2. 6 = 4 3. 5 + 7 = 180 4. 5 + 6 = 180 5. None of the above   Justify your response: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |

7. In the diagrams below, the goal is to find the sizes of the angle marked with letter, using the given numerical information. Angles are measured in degrees. Notice the custom of marking arrows on lines to indicate that they are known to be parallel. List any angle relationships you used to solve.

|  |  |
| --- | --- |
| a.    Angle Pair Relationships: | b.    Angle Pair Relationships: |

***Use the figure below to answer #8 – 11.***

8. Tell whether the angles are *vertical angles*, a *linear pair*, or *neither*.



|  |  |  |  |
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| ∠10 and ∠11 | ∠7 and ∠10 | ∠6 and ∠8 | ∠2 and ∠4 |
| ∠1 and ∠2 | ∠l and ∠3 | ∠4 and ∠5 | ∠8 and ∠9 |

9. The measure of one angle is 7 times the measure of its complement. Find the measure of each angle.

10. Two angles form a linear pair. The measure of one angle is 15 times the measure of the other angle. Find the measure of each angle.

11. The measure of one angle is 47° less than the measure of its supplement. Find the measure of each angle.